

What is claimed is:

1. A zonal locking system for an article of footwear having a first zone and a second zone, the system comprising:

at least one curving point disposed between a first zone and a second zone of the article of footwear, the curving point being configured so that a closure line winds around the curving point to turn a line of travel of the closure line without bending any single point of the closure line at an acute angle; and

at least one rotatable closure line lock configured to move into a locking position wherein the closure line lock frictionably engages the closure line to generally prevent the closure line from moving through the curving point to allow a first tension in the closure line in the first zone to remain different than a second tension in the closure line in the second zone.

2. The system of Claim 1, wherein the system includes at least two curving points disposed on opposing sides of a body-receiving opening in the article of footwear, each of the curving points including:

a closure line guide opening configured to receive at least one closure line lock; and

a locking base configured to frictionably engage the closure line when the closure line lock is rotated into the locking position.

3. The system of Claim 2, wherein the rotatable closure line lock includes:

a hinge fixably mounted adjacent the closure line opening and having an axis generally parallel with the closure line as the closure line passes through the closure line guide opening; and

a cam lever rotatably mounted on the hinge and having a radially expanding lobe configured so that when the cam lever is rotated into a locked position, a surface of the radially expanding lobe frictionably secures the closure line against the locking base.

4. The system of Claim 1, wherein the curving point includes a rotatable cylinder mounted between the first zone and the second zone, the rotatable cylinder having an outer surface configured to windably receive the closure line and frictionably engage the closure line so that the closure line generally cannot be moved without rotating the rotatable cylinder.

5. The system of Claim 4, wherein the rotatable cylinder includes a control grip allowing the wearer to adjust at least one of the first tension in the closure line and the second tension in the closure line.

6. The system of Claim 4, wherein the rotatable closure line lock includes a cylinder lock configured to selectively prevent the rotatable cylinder from rotating.

7. The system of Claim 4, wherein the rotatable closure line lock includes a slidable cylinder mount allowing the rotatable cylinder to move along an axis of rotation having a first position wherein the rotatable cylinder can be rotated and a second position wherein the rotatable cylinder cannot be rotated.

8. The system of Claim 1, wherein the closure line includes a cable.

9. The system of Claim 1, wherein the system is disposed on a boot shell.

10. The system of Claim 1, wherein the system is disposed on a boot liner.

11. The system of Claim 1, wherein the system further comprises at least one additional zone, the system comprising:

at least one additional curving point disposed between the at least one additional zone and an adjacent zone including one of the first zone and the second zone of the article of footwear; and

at least one additional rotatable closure line lock configured to rotate into an additional locking position wherein the additional rotatable closure line lock frictionably engages the closure line to generally prevent the closure line from moving through the additional curving point to allow an additional tension in the closure line in the additional zone to remain different from an adjacent tension in the adjacent zone.

12. A closure system for an article of footwear having a first zone corresponding with a first part of the wearer's lower extremity and a second zone corresponding with a second part of the wearer's lower extremity, the system comprising:

a closure line;

a plurality of securing points to receive the closure line throughout a first zone and a second zone of an article of footwear, the securing points being configured to tighten the article of footwear when tension is applied to the closure line; and

a locking device disposed at a junction between the first zone and the second zone, the locking device including:

at least one curving point disposed between a first zone and a second zone of the article of footwear, the curving point being configured so that a closure line winds around the curving point to turn a line of travel of the closure line without bending any single point of the closure line at an acute angle; and

at least one rotatable closure line lock configured to move into a locking position wherein the closure line lock frictionably engages the closure line to generally prevent the closure line from moving through the curving point to allow a first tension in the closure line in the first zone to remain different than a second tension in the closure line in the second zone.

13. The system of Claim 12, wherein system includes at least two curving points disposed on opposing sides of a body-receiving opening in the article of footwear, each of the curving points including:

a closure line guide opening configured to receive at least one closure line lock; and

a locking base configured to frictionably engage the closure line when the closure line lock is rotated into the locking position.

14. The system of Claim 13, wherein the rotatable closure line lock includes:

a hinge fixably mounted adjacent the closure line opening and having an axis generally parallel with the closure line as the closure line passes through the closure line guide opening; and

a cam lever rotatably mounted on the hinge and having a radially expanding lobe configured so that when the cam lever is rotated into a locked position, a surface of the radially expanding lobe frictionably secures the closure line against the locking base.

15. The system of Claim 12, wherein the curving point includes a rotatable cylinder mounted between the first zone and the second zone, the rotatable cylinder having an outer surface configured to windably receive the closure line and frictionably engage the closure line so that the closure line generally cannot be moved without rotating the rotatable cylinder.

16. The system of Claim 15, wherein the rotatable cylinder includes a control grip allowing the wearer to adjust at least one of the first tension in the closure line and the second tension in the closure line.

17. The system of Claim 15, wherein the rotatable closure line lock includes a cylinder
5 lock configured to selectively prevent the rotatable cylinder from rotating.

18. The system of Claim 15, wherein the rotatable closure line lock includes a slidable cylinder mount allowing the rotatable cylinder to move along an axis of rotation having a first position wherein the rotatable cylinder can be rotated and a second position wherein the rotatable cylinder cannot be rotated.

10 19. The system of Claim 12, wherein the closure line includes a cable.

20. The system of Claim 12, wherein the system is disposed on a boot shell.

21. The system of Claim 12, wherein the system is disposed on a boot liner.

22. The system of Claim 12, wherein the system further comprises at least one additional zone, the system comprising:

15 at least one additional curving point disposed between an additional zone and an adjacent zone including one of the first zone and the second zone of the article of footwear; and

at least one additional rotatable closure line lock configured to move into an additional locking position wherein the additional rotatable closure line lock
20 frictionably engages the closure line to generally prevent the closure line from moving through the additional curving point to allow an additional tension in the closure line in the additional zone to remain different from an adjacent tension in the adjacent zone.

23. A footwear system having a zonal locking system having a first zone corresponding
25 with a first part of the wearer's lower extremity and a second zone corresponding with a second part of the wearer's lower extremity, the system comprising:

a sole;

an upper mounted on the sole and configured to receive a lower extremity of the
wearer, the upper including:

30 a closure line;

a plurality of securing points to receive the closure line throughout a first zone and a second zone of the system, the securing points being configured to close the system when tension is applied to the closure line; and

a locking device disposed at a junction between the first zone and the second zone, the locking device including:

a curving point disposed between the first zone and the second zone, the curving point being configured so that the closure line winds around the curving point to turn a direction of travel of the closure line without bending the closure line at an acute angle; and

a rotatable lock configured to frictionably engage the closure line to prevent the closure line from moving through the curving point to allow a first tension in the closure line in the first zone to remain different than a second tension in the closure line in the second zone.

24. The system of Claim 23, wherein system includes at least two curving points disposed on opposing sides of a body-receiving opening in the article of footwear, each of the curving points including:

a closure line guide opening configured to receive at least one closure line lock; and

a locking base configured to frictionably engage the closure line when the closure line lock is rotated into the locking position.

25. The system of Claim 24, wherein the closure line lock includes:

a hinge fixably mounted adjacent the closure line opening and having an axis generally parallel with the closure line as the closure line passes through the closure line guide opening; and

a cam lever rotatably mounted on the hinge and having a radially expanding lobe configured so that when the cam lever is rotated into a locked position, a surface of the radially expanding lobe frictionably secures the closure line against the locking base.

26. The system of Claim 23, wherein the curving point includes a rotatable cylinder mounted between the first zone and the second zone, the rotatable cylinder having an outer

surface configured to windably receive the closure line and frictionably engage the closure line so that the closure line generally cannot be moved without rotating the rotatable cylinder.

27. The system of Claim 26, wherein the rotatable cylinder includes a control grip allowing the wearer to adjust at least one of the first tension in the closure line and the second tension in the closure line.

28. The system of Claim 26, wherein the closure line lock includes a cylinder lock configured to selectively prevent the rotatable cylinder from rotating.

29. The system of Claim 26, wherein the closure line lock includes a slidable cylinder mount allowing the rotatable cylinder to move along an axis of rotation having a first position wherein the rotatable cylinder can be rotated and a second position wherein the rotatable cylinder cannot be rotated.

30. The system of Claim 23, wherein the closure line includes a cable.

31. The system of Claim 23, wherein the upper includes a boot shell.

32. The system of Claim 23, wherein the upper includes a boot liner.

33. The system of Claim 23, wherein the system further comprises at least one additional zone, the system comprising:

at least one additional curving point disposed between an additional zone and an adjacent zone including one of the first zone and the second zone of the article of footwear; and

at least one additional closure line lock configured to rotate into an additional locking position wherein the additional closure line lock frictionably engages the closure line to generally prevent the closure line from moving through the additional curving point to allow an additional tension in the closure line in the additional zone to remain different from an adjacent tension in the adjacent zone.

34. A zonal locking system for an article of footwear having a first zone and a second zone, the system comprising:

a locking base disposed between a first zone and a second zone of the article of footwear, the locking base being configured to receive a closure line passing between the first zone and the second zone; and

a cam lock including:

a hinge having an axis generally parallel with the closure line;

a cam lever rotatably mounted on the hinge having a radially expanding lobe configured so that when the cam lever is rotated into a locked position, a surface of the radially expanding lobe frictionably secures the closure line against the locking base to allow a first tension in the closure line in the first zone to remain different than a second tension in the closure line in the second zone.

35. The system of Claim 34, wherein the closure line includes a cable.

36. The system of Claim 34, wherein the system is disposed on a boot shell.

37. The system of Claim 34, wherein the system is disposed on a boot liner.

38. A zonal locking system for an article of footwear having a first zone and a second zone, the system comprising:

a cylinder mount disposed between a first zone and a second zone of the article of footwear; and

a rotatable cylinder configured to rotatably engage the cylinder mount and rotating about an axis generally perpendicular to a surface of the cylinder mount, the rotatable cylinder including:

an outer surface configured to receive a closure line wrapped around the outer surface and frictionably engage the closure line so that the closure line generally cannot be moved without rotating the rotatable cylinder about the axis; and

a cylinder lock configured to selectively prevent the rotatable cylinder from rotating to allow a first tension in the closure line in the first zone to remain different than a second tension in the closure line in the second zone.

39. The system of Claim 38, wherein the curving point includes a rotatable cylinder mounted between the first zone and the second zone, the rotatable cylinder having an outer surface configured to windably receive the closure line and frictionably engage the closure line so that the closure line generally cannot be moved without rotating the rotatable cylinder.

40. The system of Claim 39, wherein the rotatable cylinder includes a control grip allowing the wearer to adjust at least one of the first tension in the closure line and the second tension in the closure line.

5 41. The system of Claim 39, wherein the closure line lock includes a cylinder lock configured to selectively prevent the rotatable cylinder from rotating.

42. The system of Claim 41, wherein the closure line lock includes a slidable cylinder mount allowing the rotatable cylinder to move along an axis of rotation having a first position wherein the rotatable cylinder can be rotated and a second position wherein the rotatable cylinder cannot be rotated.

10 43. The system of Claim 38, wherein the closure line includes a cable.

44. The system of Claim 38, wherein the system is disposed on a boot shell.

45. The system of Claim 38, wherein the system is disposed on a boot liner

46. A method for providing zonal locking of a closure line used to close an article of footwear, the method comprising:

15 looping a closure line around a curving point between a first zone and a second zone so that the closure line winds around the curving point to turn a direction of travel of the closure line without bending the closure line at an acute angle; and

20 moving a rotating locking member into a locked position so that the rotating locking member frictionably engages the closure line at the curving point preventing the closure line from moving through the curving point to allow the first tension in the closure line to remain different than the second tension in the closure line.

25 47. The method of Claim 46, further comprising providing at least one additional zone, the method comprising:

looping a closure line around at least one additional curving point disposed between an additional zone and an adjacent zone including one of the first zone and the second zone of the article of footwear; and

30 moving at least one additional rotating locking member into a locked position so that the additional rotating locking member frictionably engages the closure line to generally prevent the closure line from moving through the additional

curving point to allow an additional tension in the closure line in the additional zone to remain different from an adjacent tension in the adjacent zone.

48. A method for providing zonal locking of a closure line used to close an article of footwear, the method comprising:

passing a closure line through a pair of locking guides mounted between a first zone and a second zone so that the closure line winds around the curving point to turn a direction of travel of the closure line without bending the closure line at an acute angle; and

rotating a locking member into a locked position so that the rotating locking member frictionably engages the closure line at the curving point preventing the closure line from moving through the curving point to allow the first tension in the closure line to remain different than the second tension in the closure line.

49. The method of Claim 48, further comprising providing at least one additional zone, the method comprising:

looping a closure line around at least one additional curving point disposed between an additional zone and an adjacent zone including one of the first zone and the second zone of the article of footwear; and

rotating at least one additional rotating locking member into a locked position so that the additional rotating locking member frictionably engages the closure line to generally prevent the closure line from moving through the additional curving point to allow an additional tension in the closure line in the additional zone to remain different from an adjacent tension in the adjacent zone.